

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows.

1. [[c1]] (Currently Amended) A method for resolving updates in a directory server, comprising:
generating at least one change sequence number associated with a first replica, wherein the change sequence number is a tuple comprising:
a timestamp, a sequence number, a replica identifier, and a subsequence number;
creating a total ordering of operations by time using the change sequence number;
extracting state information from an entry associated with an operation from the total ordering; ~~and~~
generating a replica update vector comprising the change sequence number;
communicating the update vector to a second replica
computing a new state for the entry using extracted state information and the operation associated with the entry~~[[.]]~~ ;
generating a replica update vector comprising the change sequence number;
communicating the replica update vector to a second replica; and
determining the smallest set of updates to send using the replica update vector.
2. [[c2]] (Currently Amended) The method of claim 1, wherein total ordering is enforced by a value resolution routine.
3. [[c3]] (Currently Amended) The method of claim 1, wherein state information is recorded for an attribute of the entry.
4. [[c4]] (Currently Amended) The method of claim 3, wherein state information is recorded for a value of the attribute.
5. [[c5]] (Currently Amended) The method of claim 1, further comprising:
storing state information in the directory server.

6. [[c6]] (Currently Amended) The method of claim 1, further comprising:
promulgating copies of data by update resolution procedure to a consumer server.
7. [[c7]] (Currently Amended) The method of claim 1, further comprising:
promulgating copies of data by update resolution procedure to a supplier server.
8. [[c8]] (Currently Amended) A directory server comprising:
a supplier server;
a consumer server in communication with the supplier server;
a plurality of pluggable services that manage replication of data contained within the
directory server from the supplier server to the consumer server; and
an update resolution procedure used to detect and resolve update conflicts between consumer
servers, wherein the update resolution procedure utilizes a replica update vector to
determine the smallest set of updates to communicate from the supplier server to the
consumer server;
wherein replication of data is managed using the update resolution procedure.
9. [[c9]] (Currently Amended) The directory server of claim 9, wherein the update resolution
procedure uses an update resolution policy to detect and resolve update conflicts between
consumer servers.
10. [[c10]] (Currently Amended) The directory server of claim 9, wherein the update resolution
procedure promulgates copies of data to the consumer server.
11. [[c11]] (Currently Amended) The directory server of claim 9, wherein the update resolution
procedure promulgates copies of data to the supplier server.
12. [[c12]] (Currently Amended) An apparatus for resolving updates in a directory server,
comprising:
means for generating at least one change sequence number associated with a first replica,
wherein the change sequence number is a tuple comprising:
a timestamp, a sequence number, a replica identifier, and a subsequence number;

means for creating a total ordering of operations by time using the change sequence number;
means for extracting state information from an entry associated with an operation from the
total ordering; and

means for computing a new state for the entry using extracted state information and the
operation associated with the entry[[]] ;

means for generating a replica update vector comprising the change sequence number;

means for communicating the replica update vector to a second replica; and

means for determining the smallest set of updates to send using the replica update vector.